



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,945	10/30/2003	Shintaro Yamada	500.43230X00	6254
20457	7590	09/22/2005		EXAMINER
		ANTONELLI, TERRY, STOUT & KRAUS, LLP		BRASE, SANDRA L
		1300 NORTH SEVENTEENTH STREET		
		SUITE 1800	ART UNIT	PAPER NUMBER
		ARLINGTON, VA 22209-3873		2852

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/695,945	YAMADA ET AL.	
	Examiner Sandra L. Brase	Art Unit 2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 July 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 and 6-13 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 and 5 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 October 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/30/03</u> .	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species restriction requirement in the reply filed on 7/20/05 is acknowledged. The traversal is on the ground(s) that claims 1 and 6 are generic. This is not found persuasive because the claim language of claim 1 specifies a shape and configuration of a development means, where this corresponds to Species I, and the claim language of claim 6 specifies a shape and configuration of a toner regulating blade, where this corresponds to Species II. Therefore, there are no generic claims in the current application. Applicant is to note that there is no rule or law requiring a species restriction to designate all of the existing figures in an application to correspond with one species or another.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 2 and 6-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7/20/05. Claims 3 and 4, which were elected as corresponding to Species I, are also withdrawn from consideration as being depended upon a non-elected claim, where claim 3 depends upon claim 2 which is non-elected and claim 4 depends upon claim 3.

Specification

3. The abstract of the disclosure is objected to because of the following.

On lines 1 and 3 of the abstract, “comprises” should be changed to “includes”.

On lines 2-3 of the abstract, the language “overlapped one another” is unclear as to its meaning, where it could be changed to “that form images that are overlapped”.

On line 3 of the abstract, the language “The image forming device” is unclear as to whether or not the following pertains to just one image forming device or to each of the plurality of image forming devices, where this language could be changed to “One of the plurality of image forming devices” or could be changed to “Each of the plurality of image forming devices”.

On line 6 of the abstract, it is unclear as to what specific direction is described by “an overlapped direction”.

The sentence beginning on line 9 of the abstract and ending on line 13 should be deleted since it pertains to Species II, which is a non-elected species.

4. Correction is required. See MPEP § 608.01(b).

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

6. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

7. Claims 1 and 5 are objected to because of the following informalities.

Appropriate correction is required.

On lines 1-11 of claim 1, it is not clear as to whether each of the plurality of image forming means include the following components or that the components are merely included somewhere in the plurality of image forming means.

On lines 12-13 of claim 1, the language “the plurality of image forming means are arranged in contact with the photosensitive drums” is inconsistent with the language on lines 2-3 of claim 1 that specifies that a photosensitive drum is included in the plurality of image forming means, thus since the photosensitive drum is part of the image forming means, then it is unclear as to how the photosensitive drum can be in contact with itself. This language could be changed to “each of the plurality of image forming means includes a photosensitive drum, where each photosensitive drum of each of the plurality of image forming means are arranged in contact with”.

On line 13 of claim 1, “the photosensitive drums” lack proper antecedent basis since only one photosensitive drum was previously claimed.

On lines 17-21 of claim 1, the claim language is unclear, where it could be changed to “images formed on a photosensitive drum of each of the plurality of image forming means are transferred to be overlapped upon each other so as to form a color image through the intermediate transfer belt or directly to a medium”.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Numazu et al. (US 5,765,082).

10. Numazu et al. (...082) disclose an electrophotographic apparatus comprising a plurality of image forming means, each of the plurality of image forming means comprise a photosensitive drum (41a, 41b, 41c and 42) provided on a surface thereof with a photosensitive layer (col. 10, lines 3-6), charging means (102) for having the photosensitive layer charged at a predetermined electric potential, exposure means (109) for subjecting the photosensitive layer to exposure on the basis of image data to form an electrostatic latent image, and developing means (103) for adhering toner to the electrostatic latent image on the photosensitive drum to form a toner image, and wherein each of the photosensitive drum of each of the plurality of image forming means is in contact with a straight portion of a medium conveyance belt (43), where images formed on a photosensitive drum of each of the plurality of image forming means are transferred to be overlapped upon each other so as to form a color image directly on a medium conveyed by the medium conveyance belt (col. 10, lines 10-54; and col. 16, lines 3-42). The developing means of each of the plurality of image forming means comprises a tip end part and a toner storage part coupled to the tip end part to store toner (figures 3 and 4). The tip end part

comprises a developing roller (104) in contact with the photosensitive drum to rotate to form a thin toner layer on a surface of the photosensitive drum (col. 15, line 66 – col. 16, line 2), a supplying roller (107) for supplying toner to the developing roller, and a toner regulatory blade (108) brought into linear contact with an outer peripheral surface of the developing roller at a predetermined pressure to form a thin toner layer on the surface of the photosensitive drum (col. 14, lines 54-59). The thickness of the tip end part of the developing means in a direction of movement of the medium conveyance belt is smaller than a thickness of the toner storage part in the direction of movement of the medium conveyance belt (figures 3 and 4). The exposure means (109) is arranged in a location, in which the tip end part of the developing means is small in thickness (figures 3 and 4; and col. 15, lines 1-7).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 2852

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Numazu et al. (US 5,765,082) in view of Nishimura et al. (US 5,475,478).

14. Numazu et al. (...082) disclose the features mentioned previously, but do not disclose that only the toner storage part of the developing means is detachably mounted in the body of the electrophotographic apparatus. Nishimura et al. (...478) disclose a developing means where a tip end part of the developing means is fixed to a body of an image forming apparatus and only a toner storage part of the developing means is detachably mounted in the body of the electrophotographic apparatus (col. 4, lines 10-14; and figure 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to have only the toner storage part of the developing means detachably mounted in the body of the electrophotographic apparatus, as disclosed by Nishimura et al. (...478), so that only the toner storage part of the developing means needs to be replaced when toner needs to be replenished.

Prior Art

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kinouchi et al. (US 5,386,286), Kanekura et al. (US 2002/0003977), Horrall et al. (US 6,681,094) and Abe et al. (US 6,799,011) disclose an image forming apparatus including a plurality of image forming means, where each of the plurality of image forming means having a developing means, where each of the developing means has a tip end portion and a storage

Art Unit: 2852

portion, where the tip end portion has a thickness smaller than the thickness of the toner storage portion.

Suzuki et al. (US 5,491,537), Ishii (US 5,671,461), Funayama et al. (US 6,603,940) and Wang et al. (US 6,628,914) disclose a detachable toner storage portion of a developing device.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra L. Brase whose telephone number is 571-272-2131. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley, can be reached on 571-272-2136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sandra L. Brase
Primary Examiner
Art Unit 2852

September 19, 2005